DSDC ASSESSMENT OVERVIEW

PRESENTED BY
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OBJECTIVES

- To understand purpose of assessment
- To understand assessment process
- To understand role in assessment

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TOPICS

- Types of Appraisals
- CMM Based Appraisal for Internal Process Improvement (CBA-IPI)
- Assessment Activities
- DSDC Assessment Plans

HISTORY OF APPRAISAL METHODS

1988 -1991 Self-assessments

1990 -1995 Software Process Assessments (SPA)

1991-1993 Capability Maturity Model for Software, Ver. 1.0

CURRENT APPRAISAL METHODS

Interim Profile

Software Capability Evaluation (SCE), Version 3.0

CMM-Based Appraisal for Internal Process Improvement (CBA IPI)

SCE vs. CBA IPI

SCE	CBA IPI
Evaluation (usually for source selection)	Assessment (for internal process improvement)
Done TO you	Done WITH you
Requester determines scope	Organization determines scope
Requester owns results	Organization owns results

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CBA-IPI ELEMENTS

ASSESSMENT PLAN

ASSESSMENT TEAM

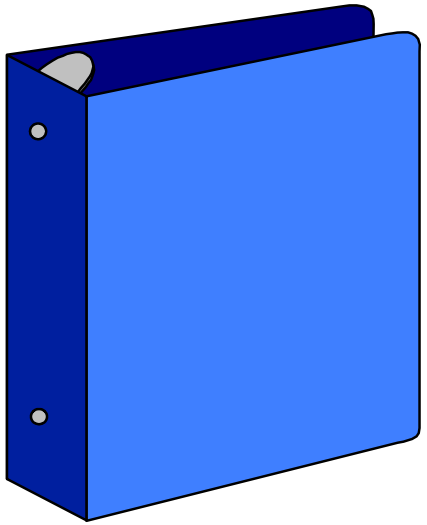
DATA COLLECTION

DATA VALIDATION

RATING

REPORTING OF ASSESSMENT RESULTS

ASSESSMENT PLAN



INCLUDES

- **Goals for assessment**
- **CMM and organization scope**
- **Schedule and resources**
- **Assessment outputs and follow-on activities**
- **Planned tailoring of assessment method**
- **Risks and constraints**
- **Sponsor’s authorization**

ASSESSMENT PARTICIPANTS

- **Assessment Team**

  6 DSDC + 2 Certified Lead Assessors
- **Project Leaders (4)**
- **Questionnaire Respondents (4-8)**
- **Functional Area Representatives**

  6-12 per session

  grouped by area

ASSESSMENT ACTIVITIES

- **EXECUTIVE BRIEFING**
- **PRE-ASSESSMENT ACTIVITIES**
- **ONSITE ACTIVITIES**
- **FINAL REPORT AND RECOMMENDATIONS BRIEF**
- **FOLLOW-ON ACTIVITIES**

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EXECUTIVE BRIEFING

- **Senior Management**
- **Benefits of CBA-IPI**
- **Return on Investment**
- **Overview of CBA-IPI process**

PRE-ASSESSMENT ACTIVITIES

- Identify assessment scope
- Develop assessment plan
- Prepare and train team
- Brief assessment participants

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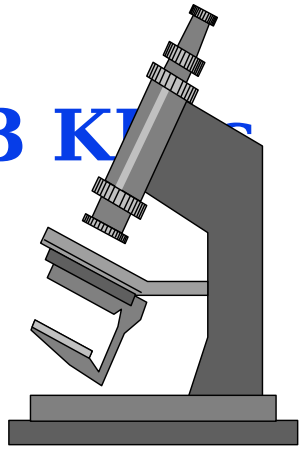
FEBRUARY 1997 ASSESSMENT SCOPE

CMM SCOPE

Included all Level 2 and Level 3 KPAs



ORGANIZATION SCOPE

Included all capital enhancement projects in the Procurement Product Line

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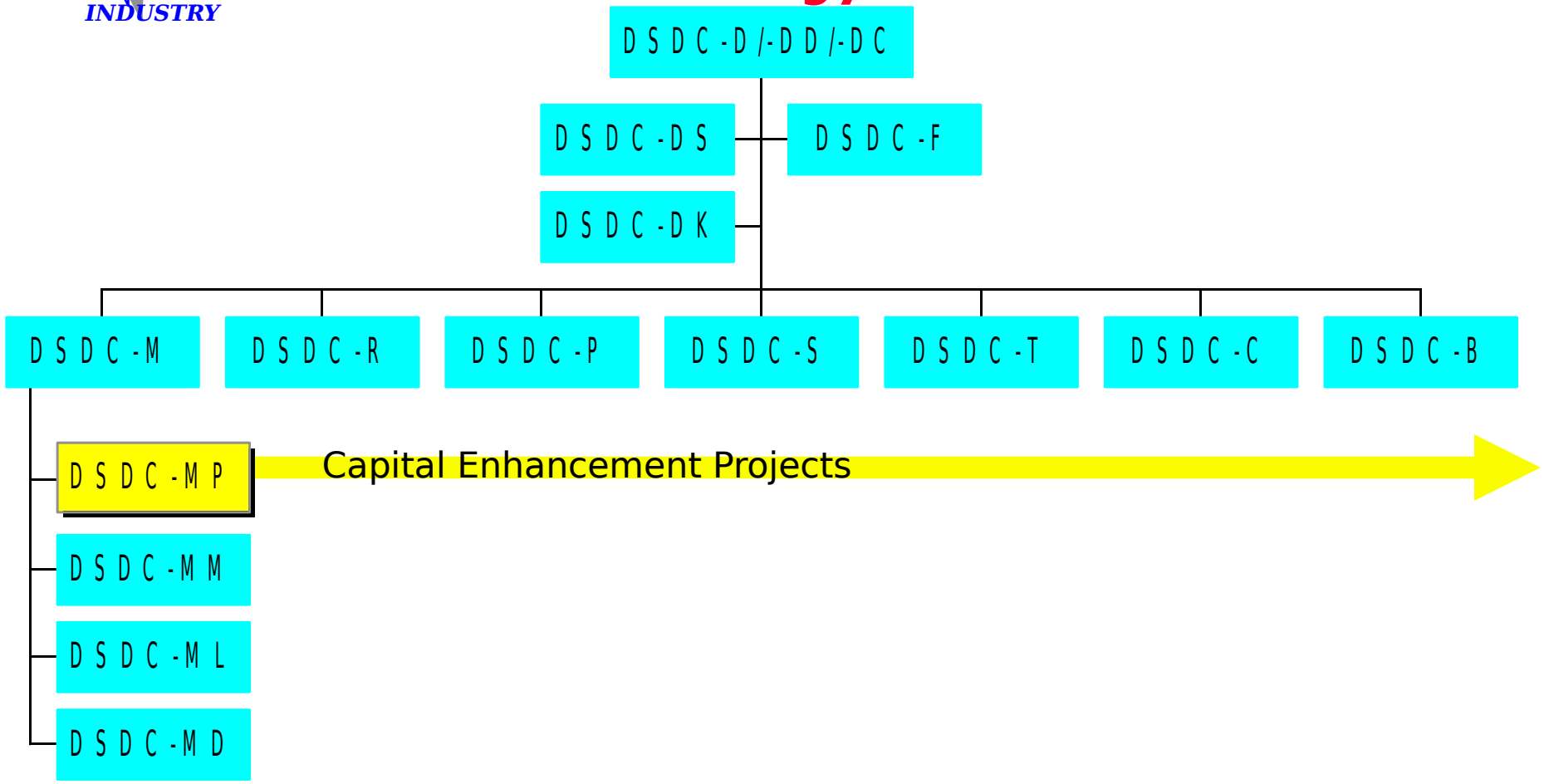
SCOPE OF 1997 FORMAL ASSESSMENT

Sep 96 - Feb 97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Capital Enhancement Projects
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ASSESSMENT PRINCIPLES

CONFIDENTIAL

- OBSERVE STRICT CONFIDENTIALITY
- INVOLVE SENIOR MANAGEMENT AS ASSESSMENT SPONSOR
- APPROACH ASSESSMENT COLLABORATIVELY
- INTERVIEW MANAGEMENT SEPARATELY FROM PRACTITIONERS
- FOCUS ON ACTION

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DATA SOURCES

- **Maturity questionnaire responses (CMM terminology)**
- **Interview data from individual Project Manager interviews (DSDC terminology)**
- **Interview data from Functional Area Representatives (FAR)s**
- **Document data**
- **Presentation data**

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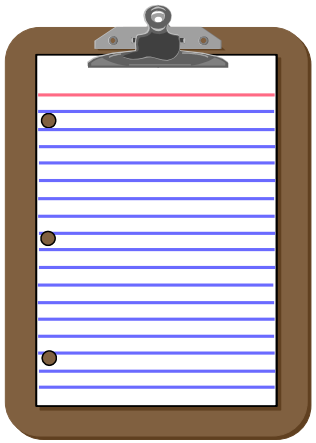
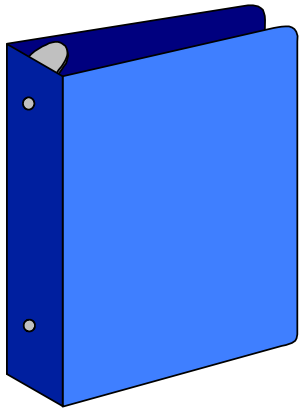
TYPES OF DOCUMENTS

- Plans
- Procedures
- Reports
- Correspondence
- Meeting Minutes





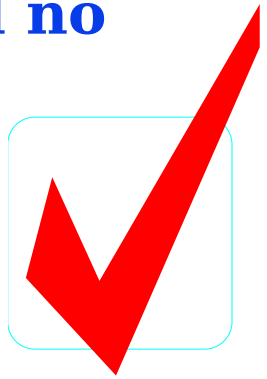
DATA VALIDATION RULES OF CORROBORATION

- Observations are based on data from at least two independent sources
- Observations are based on data obtained during at least two different data-gathering sessions
- Observations are confirmed by at least one data source reflecting work actually being done.

RATING

1. A KPA or goal is satisfied if this aspect of the CMM is implemented and institutionalized either as defined in the CMM, or with an adequate alternative.

2. A KPA goal is unsatisfied if there are significant weaknesses in the appraised entity's implementation or institutionalization of this aspect of the CMM, as defined, and no adequate alternative is in place.



RATING CONT'D

3. A KPA or goal is <u>not applicable</u> if the KPA is not applicable in the organization's environment.

4. A KPA or goal is <u>not rated</u> if the associated appraisal findings do not meet the coverage criteria or if this aspect of the CMM falls outside the scope of the appraisal.

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IMPLEMENTATION VS. INSTITUTIONALIZATION

AN ACTIVITY IS:

- **IMPLEMENTED**

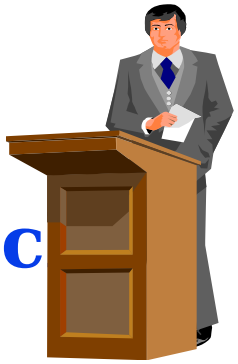
  when
  documented
  trained
  used

- **INSTITUTIONALIZED**

  when ALSO
  measured
  changed based on lessons learned
  triggers a consequence if not followed

REPORTING RESULTS

- **Final Findings Briefing**



- **Strengths and weaknesses of eac KPA**

- **KPA Profile**

  Indicates whether KPAs are satisfied, unsatisfied, not rated, or not applicable

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CMM Key Process Area (KPA) Profile Increment 3

LEVEL 2

MATURITY LEVEL

3 Defined KPAs

- Peer Reviews
- Intergroup Coordination
- Software Product Engineering
- Integrated Software Management
- Training Program
- Organization Process Definition
- Organization Process Focus

2 Repeatable KPAs

- Software Configuration Management
- Software Quality Assurance
- Software Subcontract Management
- Software Project Tracking & Oversight
- Software Project Planning
- Requirements Management

	Fully Satisfied
	Partially Satisfied
	Not Satisfied
NA	Not Applicable
X	Not Rated

FOLLOW-ON ACTIVITIES

- ***ASSESSMENT TEAM***
  - **Develops recommendations**
  - **Documents assessment results**
  - **Prioritizes issues**

- ***SEPG***
  - **Develops action plan**
  - **Implements establishing phase**

STRENGTHS

- Strong Senior Management Commitment to Process Improvement
- SEPG is operating effectively
- Associates not afraid of hard work
- Organization has strong technical capabilities
- Organization is eager to improve
- Organization committed to delivering quality products
- Organization knows and supports its systems and customers
- Organization understands that everyone (including customers) must take this journey together
- DSDC Project Guide is a very effective tool
- Auditing has enhanced implementation of the process

RECURRING THEMES

- Resources are adequate for current workload but can easily become strained with downsizing and increased number of projects
- Metrics are being collected but not used effectively to improve the process
- Metrics have not been defined for all level 3 KPAs and therefore there is limited management visibility
- Policies and procedures have not been fully defined for most level 3 KPAs
- Level 3 Institutionalization Common Features are not satisfied for most KPAs

RECOMMENDATIONS

- Review metrics program and how the metrics can be used more effectively to improve process and products
- Review resource allocations based on changes in the organization and workloads
- Address life cycle requirements traceability
- Establish an organizational planning database
- Establish defect and lessons learned database
- Improve definition of technical interfaces with subcontractors
- Acquire automated tool for configuration management
- Expand SQA audits to cover technical software products

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ASSESSMENT SCHEDULE

- **February 1997 Procurement Product Line Assessment**
- **1997 - 1998 Training, Audits & Internal Assessments**
- **1998 - 1999 Level 2 & 3 Assessments of all DSDC**